STRESS REDUCTION SUPPORT FOR NEW TEACHERS IN RURAL ALASKA

By

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Abstract

Teachers experience many different facets of stress that directly affect attrition and burnout in the profession. While the research on teacher retention and attrition in Arctic Alaska is limited, that does not diminish the impact felt by the students, the community, and the state. Teacher attrition and retention is a multidimensional issue that could benefit from an intervention created on behalf of administrators, communities, and the teachers themselves. This paper presents one approach to address teacher retention: teachers and administrators incorporating stress reduction techniques into their lives have been proven successful in reducing teacher stress to mitigate teacher burnout.

"One looks back with appreciation to the brilliant teachers, but with gratitude to those who touched our human feelings. The curriculum is so much necessary raw material, but warmth is the vital element for the growing plant and for the soul of the child."

~ Carl Jung

Stress Reduction Support for New Teachers in Rural Alaska

Some teachers are immediately drawn in by a romanticized vision of working in rural Alaska, while others take jobs in those schools due to a lack of job opportunities in more populated cities. In addition, large paychecks and lucrative retirement packages are strong attractants (Hanlon, 2017; Heimbuch, 2011). Despite these motivations, teacher turnover in rural Alaska has remained a consistent problem. High turnover rates of more than 23% on average have occurred in Alaskan rural schools (Hanlon, 2017; Heimbuch, 2011). In addition, more than 70% of newly hired teachers are not from Alaska and fewer than 5% are Alaska Native teachers (Boots, 2014; Hill & Hirshberg, 2013; Kaden, Patterson, Healy, & Adams, 2016). Teacher turnover is costly for school districts and their communities, and the constant turnover has a negative effect on both sides of the teacher–community relationship (Heimbuch, 2011; Kaden et al., 2016). High teacher turnover can be detrimental to students' accomplishments and their engagement in education (Kaden et al., 2016). Teacher turnover affects student achievement, contributes to a school climate of instability, and redirects funds to recruitment that would be better spent on student enrichment (Kaden et al., 2016). There have been several possibilities put forward regarding the high turnover in rural Alaska: isolation and loneliness, cultural differences, and community prejudice (Heimbuch, 2011). This project proposes one approach to addressing the issue of teacher retention in rural Alaska.

One factor that appears to drive teacher turnover is stress (Harris, 2011). Any teacher moving to a rural community that, in many cases is very different from the societal norms they are used to may experience higher levels of stress. Consistently addressing the mental health of new teachers, especially for those experiencing "culture shock," and providing constant support have been shown to be paramount in minimizing teacher stress and burnout (Anderson, Levinson, Barker, & Kiewra, 1999; Harris, 2011; Issari, 2006).

With Alaska's need to reduce the turnover of teachers, the research question for this final project is: "What stress reduction component for teachers in Arctic Alaska could help reduce the turnover of teachers in this region?"

Project Focus

The following literature review presents a summary of recent research on stress and its effect on teacher attrition. When investigating the current literature, trends of teacher attrition were notable in Arctic Alaska. The conceptual model for teacher attrition and retention explores individual stress management as an option to increase teacher retention in Arctic Alaska. Individual stress management centers on educating about the nature of stress, understanding how stress manifests, and presenting strategies (physical, mental and emotional) to reduce stress. Based on previous studies (Anderson et al., 1999; Curry & O'Brien, 2012; Harris, 2011; Jesus & Conboy; 2001; Richards, 2012; Sedivy-Benton & Boden-Mcgill, 2012; Yildirim, 2017; Yoshihara, Hiramoto, Oka, Kubo & Sudo, 2014) exploring the implementation of individual stress management with teachers, and those positive outcomes, the author postulates that such an implementation in Arctic Alaska would help with teacher retention.

Literature Review

What is Stress?

Stress is not a stagnant state; stress changes and evolves or diminishes depending on the individual and the environment (The American Institute of Stress, n.d.; National Institute of Mental Health, n.d.). In order to understand how individuals learn to cope with stress, it is important to be knowledgeable of the different theories of stress and the coping strategies that have emerged from research. Stress has been viewed as a response, a stimulus, and a transaction (Walinga, 2014). Individual response to stress varies, as each individual experiences stress differently (The American Institute of Stress, n.d; National Institute of Mental Health, n.d.).

Hans Seyle (1956) introduced stress as a response model in his general adaptation syndrome. In this model, stress is viewed as a dependent variable as an individual progresses through three phases of stress: alarm, resistance, and burnout (Figure 1) (Walinga, 2014; Yildirim, 2017). In the first phase, there is a physical response – the body is alarmed and prepares to confront a potential emergency. If the stress persists, the second phase—resistance—arises. In this stage, individuals may act as if they are living under normal conditions, but in reality, they are slowly losing their resistance (Walinga, 2014; Yildirim, 2017). The last stage, burnout, occurs when the body cannot withstand the physical toll of the stress and loses its resistance; burnout is a physical and emotional response to chronic work-related stress and an individual's subconscious attempts to either adapt to or protect themselves from it (Walinga, 2014; Yildirim, 2017).

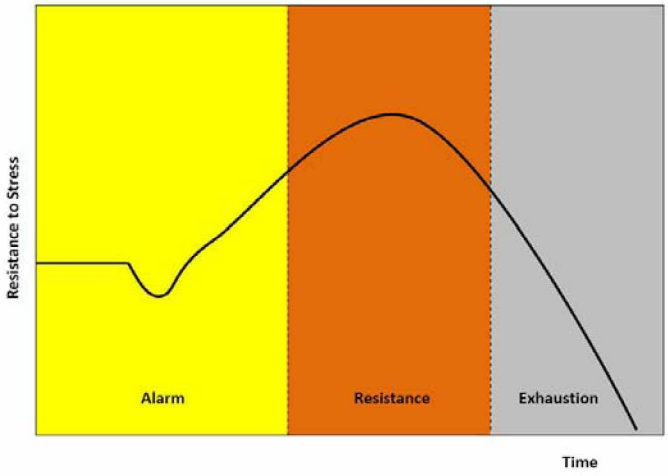

Figure 1 General Adaptation to Stress Model (Walinga, 2014)

Holmes and Rahe (1967) introduced the theory of stress as a stimulus in the Social Readjustment Rating Scale. The scale consists of forty-two life events scored based on the degree of adjustment they would demand of the individual experiencing them (Walinga, 2014). Through this, Holmes and Rahe viewed stress is an independent variable in the health-stress-coping equation – the cause of an experience rather than the experience itself. Stress as a stimulus theory is based on the assumption that change is inherently stressful, life events demand the same level of adjustment across the population, and that there is a limit to this adjustment after which illness will result (Walinga, 2014).

Richard Lazarus (1984) stated, "Stress resides neither in the situation nor in the person; it depends on a transaction between the two." Lazarus developed the Transactional Theory of Stress and Coping (TTSC) to present the theory of stress as more of a dynamic process. TTSC presents stress as a product of a transaction between a person (including multiple systems: cognitive, physiological, affective, psychological, neurological) and his or her complex environment (Walinga, 2014). Researchers have expanded upon TTSC through the introduction of multiple variables to the stress-as-transaction model, expanding and categorizing various

factors to account for the complex systems involved in experiencing a stressor (Walinga, 2014). The nature of stress was described in multiple ways: acute, episodic or intermittent, and chronic. Different types of stressors emerged, such as event, situation, cue, and condition, which then fell into categories based on locus of control, predictability, tone, impact, and duration. Figure 2 illustrates theories of stress as a response, stimulus, and transaction (Walinga, 2014).

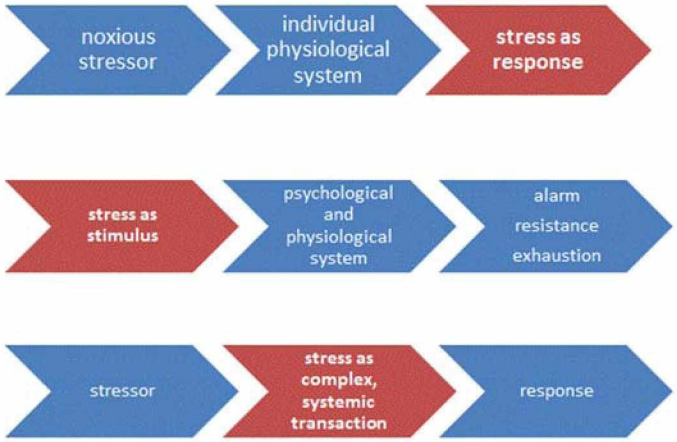

Figure 2 Theories of stress as response, stimulus, and transaction (Walinga, 2014).

Because stress manifests itself differently in each individual, recognizing or diagnosing the impact of stress may be difficult (American Psychological Association, 2014a; National Institute of Mental Health, n.d.). One example of stress manifestation is somatization, which is the physical manifestation of mental stress (Yoshihara et al., 2014). Common symptoms of somatization are headaches, dizziness, chest pain, lower back pain, nausea, muscle soreness, breathing problems, hot or cold spells, numbness or tingling in parts of the body, lumps in the throat, a weak feeling in parts of the body, and a heavy feeling in the arms or legs; all symptoms which could easily be construed as another illness (Yoshihara et al., 2014). Taking a stress assessment is the first step to assist teachers in determining the sources and levels of stress in

their lives. Stress assessments can be administered by a professional or be found online at the American Institute of Stress (The American Institute of Stress, n.d.).

Stressors Contributing to Teacher Attrition

Combating the negative effects of teacher stress has been a focal point of educational concern for decades, resulting in the development of several teacher-stress scales that encompass various strategies to address the negative effects of teacher stress. Numerous publications have ranked teaching as one of the highest stress-related fields with stress induced outcomes (Collie, Shapka, & Perry, 2012; Sass, Seal, & Martin, 2011; Spilt, Koomen, & Thijs, 2011). There are many facets that affect a teacher's stress level and lead to job dissatisfaction: (a) administrative issues (overcrowded classrooms, low salaries, a lack of support, constant changes to the national curriculum), (b) student behavior (discipline problems, violence, drugs), (c) workload, (d) school climate (quality of relationships at the school, support present, collaboration between individuals, and the teaching and learning that takes place), (e) effectiveness, and (f) motivation (Collie et al., 2012; Harris, 2011; Kaden et al., 2016; Sass et. al., 2011; Sedivy-Benton & Boden-MGill, 2012; Spilt et. al., 2011).

Administration. External relationships with school authorities and coworkers are perceived to have a more negative effect on teachers than interactions with students (Collie et al., 2012; Rumschlag, 2017; Sass et al., 2011; Sedivy-Benton & Boden-McGill, 2012). Administrators add to a stressful teacher's workload by failing to provide sufficient teacher support. Darling-Hammond (2003) postulated that work environments where teachers are supported have a magnetic effect, and draw teachers to work and remain in that environment. A study done by Sass, Seal, and Martin (2011) collected data from a sample of 479 teachers to determine predictors of dissatisfaction that would lead to a teacher's intent to quit. Three

competing theoretical models with variables related to teacher stress or support (student stressors, workload stressors, and social support) were tested using structural equation modeling.

Data from the study conducted by Sass and colleagues (2011) were collected from certified teachers employed by three public school districts in the American Southwest. The majority of participants were female (372) who were employed by urban school districts (90%). The participants were 3.3% African-American, 1.1% Asian, 61.4% Caucasian, 31.6% Hispanic, 0.9% Native American, and 1.8% biracial. Participants ranged in age from 23 to 66, with an average age of 41.82 years. The majority of teachers taught either elementary (55.3%) or middle (33%) school, with only 10.6% at the high school level. There were a few teachers (1.1 %) who taught a mixture of elementary, middle, and/or high school. Teachers taught classes across the curriculum, including both required and elective courses, with an average class size of 23.2 students. Most teachers earned either Bachelors (41.3%) or Master's (35.6%) degrees, with a few earning a Doctorate (0.4%). In addition to those teachers, a moderate percentage reported being enrolled in or taking some Master's (19.4%) or Doctorate (3.3%) level classes. Years of teaching experience ranged from one to 44, with a mean of 13.51 years. Nearly all teachers were certified (98.7%) and teaching in their certification area (99.3%). Most (83.7%) received their teacher certification from a traditional university preparation program rather than an alternative program (16.3%). Finally, most teachers (87.3%) reported receiving classroom management training and/or instruction within the past five years.

The data from the study (Sass et al., 2011) showed that one-third of the teachers surveyed cited a lack of administrative support as the cause of their job dissatisfaction. Another problem in the relationship between teachers and administrators is the belief by many teachers that educational change reforms are administered in a dictatorial manner, with little consideration

given to input from teachers, who often have a better understanding of the needs of students (Margolis & Nagel, 2006). There are a few stressors that are wrongfully attributed to administration that is out of their sphere of control: (a) budgets which are set down by school districts (with little input from administrators), (b) physical working environments constricted by the building and budgets, and (c) lags in policy implementations, often held up at the district level (Sass et al., 2011; Sedivy-Benton & Boden-McGill, 2012).

Student Behavior. Although administrator behavior is a source of stress for teachers (Collie et al., 2012; Rumschlag, 2017; Sass et al., 2011; Sedivy-Benton & Boden-McGill, 2012), student behavior can be a central cause of teacher stress (Kaden et al., 2016; Sass et al., 2011). Due to the nature of their professions, teachers spend most of their day with students and are isolated from their colleagues, which may also serve as a contributing factor to the stress they experience. Spilt and colleagues (2011) applied Lazarus's "Transactional Model of Stress and Coping" to data gathered from the Schools and Staffing Survey (SASS) 2007-2008 provided by the National Center for Education Statistics (NCES) to further explore the impact of the teacher-student relationship on the wellbeing of the teacher. The dataset in the SASS is the largest, most extensive survey of K-12 school districts, schools, administrators and teachers in the United States. In the 2007-2008 SASS, 51,000 public school teachers completed the survey. For the purposes of Spilt and colleagues study, only those teachers who indicated that they would remain or leave their profession were kept in the sample. To further define the sample set, the set included only those teachers who are full-time K-12 instructors. With these confines in mind, the final sample set of 20,324 public school teachers were identified in the dataset. The Lazarus model postulates that an individual's reaction to stress is based on a subjective interpretation of an external stressor that triggers an emotional response. Teachers may internalize the negative

relational experiences they have with their students (often daily), which can negatively affect the well-being of the teachers, constituting a source of unaddressed stress (Spilt et al., 2011).

Workload. Teacher workload is another major component of stress that contributes to burnout (Collie et al., 2012; Sass et al., 2011). Throughout the school year, the workload of a teacher includes a vast array of tasks, including adapting to new teaching approaches, keeping abreast of new technological innovations, dealing with students' behavioral problems, attending faculty meetings, and honoring commitments to parents and the community (Sass et al., 2011; Sedivy-Benton & Boden-McGill, 2012). The most extensive workload concerns that teachers have named are the ones associated with tasks outside of the classroom and the ones that take over their personal lives, especially tasks related to teacher accountability (e.g adhering to excessive government and district initiatives) (Butt & Lance, 2005; Collie et al., 2012; Sass et al., 2011). Teachers who believe there is a balance between their workload and job control tend to be more dedicated and feel a deeper sense of commitment; teachers who experience an increased level of stress tend to experience elevated psychological distress and are less committed to the profession. Variables in the teacher workload tend to have strong implications for teacher stress, which, in turn, have been shown to be related to job dissatisfaction (Sass et al., 2011).

School Climate. The relationships that teachers have with students, fellow teachers, and supervisors can contribute to the stress many teachers experience. New teachers are especially vulnerable to negative environments. According to Curry and O'Brien (2012), 40 to 50% of new teachers leave the profession within five years of entering the field. To support new teachers, campuses often implement mentoring programs to help them adjust to their new campus and to the teaching profession in general. While beneficial, support from colleagues is not always the

best approach, as staff collegiality can interfere with a teacher's ability to manage an already heavy workload (Sass et al., 2011; Sedivy-Benton & Boden-McGill, 2012). Mentoring programs that take into consideration the teacher as a human instrument, meaning an individual with the capacity to influence others' lives, and use this perspective as the main focus of the mentorship rather than concentrating on the acquisition and delivery of skills appear to be more beneficial for new teachers (Norman & Ganser, 2004).

Effectiveness. Ultimately, a teachers' sense of effectiveness affects job satisfaction. Teachers who do not feel valued tend to consider their surroundings dangerous and focus on their deficits in coping (Sass et al., 2011; Sedivy-Benton & Boden-McGill, 2012). A teacher's sense of effectiveness is not isolated and is influenced by a variety of factors, including student responsiveness, and it significantly affects classroom interactions and, ultimately, teacher stress, burnout, and intent to quit (Harris, 2011; Kaden et al., 2016). Feelings and thoughts of workplace effectiveness may be predicted through various factors, and while the factors that lead to satisfaction may encourage the teacher to remain in the position, the factors associated with job dissatisfaction increase the likelihood that a teacher will resign (Sedivy-Benton & Boden-McGill, 2012). Thus, predicting job dissatisfaction is critical to reducing the likelihood of teachers transferring to other schools or leaving the profession entirely. Sass and colleagues (2011) suggest that teacher satisfaction, and feelings of effectiveness, are connected to intrinsic rewards (e.g., student–teacher relationships, teacher and student achievements, etc.) and that teacher dissatisfaction is connected to extrinsic factors (e.g., school leadership and climate, teacher workload, school communication, etc.).

Motivation. Despite the importance placed upon teacher motivation, Jesus and Conboy (2001) found that teachers experience higher levels of stress and lower levels of motivation than

other professional groups. With proper motivational training, many teachers can practice their profession with satisfaction and self-confidence and can be encouraged to continue a professional journey characterized by personal and interpersonal development (Jesus & Conboy, 2001). There are two teacher motivation factors that education programs should strive to improve: a teacher's self-perception of competence and a teacher's professional success, both of which are suggested by the intrinsic motivation theory and the self-efficacy theory (Jesus & Conboy, 2001). To support improvement of the two identified factors, it would be beneficial for teacher education programs to incorporate further training and support for (a) teacher assertiveness, (b) improved problem-solving and problem-coping skills, (c) and the provision of tools for managing the symptoms of distress and anxiety (Jesus & Conboy, 2001; Sedivy-Benton & Boden-McGill, 2012). There is reason to believe that placing additional attention on increasing teacher motivation would equip teachers with the tools necessary to recognize the signs of teacher burnout and mitigate the effects of such.

Continuous teacher turnover is detrimental to student learning, and the environmental conditions of the school. Teachers play an influential role in students' scholastic lives, and teacher wellbeing has a direct effect on student's socioemotional adjustment and educational performance (Spilt et al., 2011). There are also the financial consequences to the school, the district, and the state that come with needing to constantly fill the vacancies left by frequent and perpetual teacher turnover (Boots, 2014; Sedivy-Benton & Boden-McGill, 2012). These are funds that could be spent on student programs and professional development programs.

Challenges with Teacher Retention in Rural Alaska

The University of Alaska reports that Alaskan public schools hire approximately 800 teachers each year, which is in stark contrast to the 274 teaching graduates the State of Alaska

university system produced in 2016 (Hanlon, 2017). To fill the gap between supply and demand, Alaska hires about 70% of its teachers from out of state (Hanlon, 2017). In rural Alaska, on average 400 teacher positions need to be filled annually, and past statistics indicate up to 30% of these teachers are likely to leave after a year or two in their positions (Boots, 2014; Hanlon, 2017; Hill & Hirshberg, 2013). Currently, approximately 60% of Alaska's teachers leave the Arctic region (the area north of the Arctic Circle accessible only by boat or plane) after less than two years (Boots, 2014; Kaden et al., 2016).

Annually, district administrators are faced with the challenge of overcoming teacher turnover to fill classrooms with qualified instructors (Hanlon, 2017; Sass et al., 2011). In 2017, the Lower Kuskokwim School District started the academic year in need of approximately a dozen teachers (Hanlon, 2017). Bering Strait School District experienced a similar situation, with about eight teacher positions vacant (Hanlon, 2017). Ty Mase, superintendent of the Lake and Peninsula Borough School District, stated, "Every year we have to work harder, and it's just getting more and more difficult. But working harder doesn't seem like it's going to keep us afloat" (Hanlon, 2017, p. 6).

Nationally, about one-third of new teachers leave the profession within five years (Kaden et al., 2016; Neason, 2014; Weale, 2016). There is more pressure to hire because, nationwide, there are fewer teachers, and superintendents of rural Alaskan school districts have reported that they are not immune from the reduced supply of teachers (Hanlon, 2017; Hill & Hirshberg, 2006). Walker, another superintendent from the Lower Kuskokwm School District in Bethel, stated that "within the past five years it's been really, really much more difficult to get folks to start the school year fully staffed. I don't even remember the last time we started the school year fully staffed" (Hanlon, 2017, p. 34).

This situation of higher teacher turnover creates an increasing demand on teachers to immediately display the high levels of on-the-job performance that result from years of teaching experience. This demand has led to a practice of letting new teachers go after only a few years in the classroom instead of taking the time to provide them with the appropriate support to foster the necessary knowledge, skills, and abilities (Kaden et al., 2016).

In addition to these expectations, overall work conditions (workload, student contact, leadership, facilities, and instructional resources) affect teachers' satisfaction at work and their ability to be effective (Kaden et al., 2016). Teachers who accept positions outside of their cultural norms experience some related stress when integrating into the new culture. While some such transitions may be small cultural journeys (e.g., a teacher moving from Idaho to Michigan), others (e.g., a teacher moving from Minnesota to Kotzebue, Alaska) can be a major source of stress (Issari, 2006). The Arctic is a unique environment with different living conditions that require special attention and can add additional stress to an individual's life if not properly maintained—for example, functioning heating systems, clean water, and air circulation in both schools and teacher housing. Educational administrators, communities, and other key stakeholders have acknowledged the stress associated with moving to rural Alaska (Boots, 2014; Heimbuch, 2011; Kaden et al., 2016).

One solution that has been discussed to help increase teacher retention in rural school districts is to hire more Alaska Native teachers. The belief is that Alaska Native teachers would stay in their positions longer, be more familiar with the students' communities and cultures, and be a powerful role model to Alaska Native students (Boots, 2016). However, there is a lack of Alaska Native teachers. Only 5% of the teachers in all of rural Alaska are Alaska Native, there

have been only 172 Alaska Native graduates in the past 44 years from the programs designed to increase Alaska Native teachers (Boots, 2016).

Only in the last six years has there been much research done to provide quantitative and qualitative metrics on the perceptions and opinions of teachers on the local factors that contribute to attrition and retention (Boots, 2014; Kaden et al,. 2016; Hill & Hirshberg, 2013). This lack of research sparked a mixed methods study done by Kaden and colleagues (2016) with 820 teachers from ten different rural school districts: Bering Strait, Denali, Iditarod, Nenana, Nome, North Slope, North West Arctic, Tanana, Yukon Flats, Yukon-Koyukuk.

Data were collected from 469 certified teachers that responded to the educator survey based on the Schools and Staffing Survey (Kaden et al., 2016). The majority of participants were female (68%). The participants were 82.8% Caucasian, 2.5% Hispanic, 9.4% Alaska Native, and 5% other. Participants ranged in age from 20 to over 55. Most teachers earned either Bachelors (53.1%) or Master's (45.4%) degrees, with a few earning a Doctorate (1.5%). In addition to those teachers, a moderate percentage reported being enrolled in or taking some Master's (23.4%) or Doctorate (2.7%) level classes. Years of teaching experience ranged from one to over 11 years, with the majority (52.9%) having taught for less than ten years, with 24.7% of those having only taught for 1 to 3 years. Nearly all teachers were certified (77.7%) outside the state of Alaska.

According to this research more than 50% of the 469 responses from the teachers surveyed reported they were less than satisfied with the support of their communities and their students' parents (Kaden et al., 2016). This lack of resources and administrative support has been shown to increase teachers' stress and job dissatisfaction. In addition, the survey revealed that another major contributing factor to teacher dissatisfaction is district leadership (Figure 3).

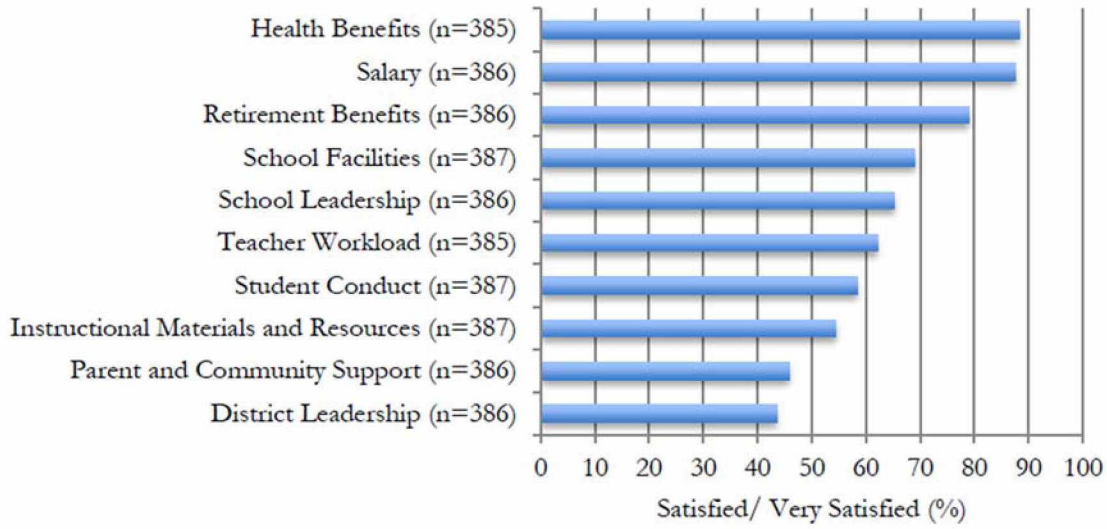

Figure 3. Work conditions and job satisfaction (Kaden et al., 2016)

Life in rural Arctic Alaska presents additional areas in which teachers experience dissatisfaction. As is often the case in rural areas, where individuals usually have multiple sets of responsibilities, 323 out of 469 teachers in rural districts report that they teach at least one multi-grade-level class (Kaden et al., 2016). Melkerson, a teacher in Kivalina, reported in an interview with Alaska Dispatch News that he teaches math and science for sixth to 12th grade students; which entails teaching pre-algebra and college prep physics in the same day (Boots, 2014, p. 5). This situation naturally results in the majority of teachers reporting the consistent need to prepare instructional material for four to seven courses (Kaden et al., 2016). To compound this additional workload, teachers also reported a lack of adequate materials and resources to prepare for these multiple classes.

Rural living entails other aspects of community and lifestyle that affect a teacher's mental well-being. According to Kaden et al. (2016), over 60% of the teachers surveyed reported that they were satisfied with their relationships, friendships, and housing. Walker, the principal in Buckland, supported this by stating that the surest sign a new teacher might stay long-term is

when they start showing up at community events such as potlucks and basketball games (Boots, 2014). In addition, the survey revealed an equal amount of satisfaction and dissatisfaction in terms of recreation and access to Internet and other forms of communication. Teachers reported that they were less than 30% satisfied with entertainment, access to health care, and shopping (Figure 4).

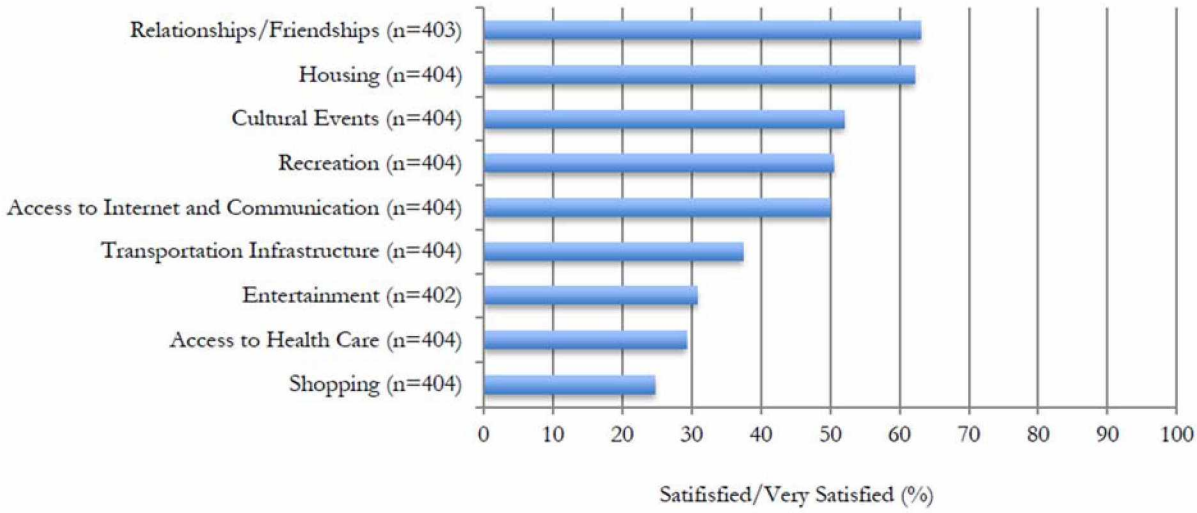

Figure 4. Community Integration and Living Conditions (Kaden et al., 2016)

While teachers and administrators are most affected by the issue of teacher retention, there exist other stakeholders with a vested interest in retaining teachers. These parties include Alaska Native Elders, community members, parents, educators from across the state, and other researchers working with Indigenous populations (Kaden et al., 2016).

The Effects of Teacher Attrition

Students. Teacher motivation is an important concern for educational leaders and administrators, as the drive of the teacher influences the motivation of students (Jesus & Conboy, 2001). Students in rural Alaska pay a price for the high teacher turnover. The majority of teachers who accept employment in rural Alaska are recent graduates who are drawn to the

promise of adventure that comes with moving to a rural community (Boots, 2014), but the constant departure of teachers from rural Alaska impedes the ability of schools to deliver quality education to students (Kaden et al., 2016).

Academically, students in Arctic Alaska do not benefit from teacher stability, which has undoubtedly negatively affected test scores and college completion rates. In the five Alaskan districts with the highest rates of teacher turnover, only an average of 46.9% students score as "proficient" on state reading tests. In contrast, in the five Alaskan districts with the lowest teacher turnover rates, an average of 85.8% of the students score as "proficient" (Boots, 2014). According to testing by the Northwest Evaluation Association (NWEA) and Mastery and Progress (MAP), proficiency is defined as scoring at Level 3 or above the 58th percentile (*Linking the Alaska AMP Assessments to NWEA MAP Tests*, 2016). Diane Hirshberg, head of the Center for Alaska Education Policy Research (CAEPR), stated that rural Alaska is suffering the consequences of an unstable teaching workforce. With a revolving door of teacher, students fall behind, test scores and college completion rates are lower – meaning fewer rural students grow up to get the degrees necessary to become teachers (Boots, 2014, p. 3).

Emotionally, these students do not generally develop supportive relationships with their teachers, as they know they will most likely leave before the end of the school year. There appears to be no incentive for the students, or their parents, to invest in a relationship with a teacher uninterested in investing in their community (Boots, 2014; Kaden et al., 2016). Teachers who experience lower perceived stress and greater perceived teaching efficacy and job satisfaction encourage greater achievement and self-efficacy in their students (Collie et al., 2012). With this in mind, teachers who are invested in their position, and feel that they are

valued are inclined to invest more into their students to ensure that they are also invested in their futures.

In addition to the academic and emotional effects, teacher departures also have an institutional effect on students. The institutional knowledge these teachers have is lost when they depart. This loss of institutional knowledge results in schools becoming even less equipped to support new teachers. The high rates of turnover disrupt the collaboration and professional trust between the school, the teachers, the students, and the community members (Kaden et al., 2016).

Monetary Costs. Teacher turnover is a national problem that, under conservative estimates, costs thousands of dollars for every teacher vacancy—cumulating in the expenditure of millions of dollars per year that would otherwise be allocated to students and their learning (Sass et al., 2011). Teacher turnover in Alaska costs the state an average of 20 million dollars a year, or around 20,000 dollars each time a district needs to hire a replacement (Hanlon, 2017). In 2013, the Northwest Arctic School District spent 85,000 dollars recruiting teachers (Boots, 2014). Teacher burnout and attrition continue to be a national concern, despite best efforts to increase the number of teachers in the workforce (Curry & O'Brien, 2012; Sass et al., 2011). A proactive approach for administrators would be to determine a path to minimize stressors and foster effective teacher coping strategies (Sass et al., 2011; Sedivy-Benton & Boden-McGill, 2012), as this has shown to be effective in reducing teacher burnout and attrition.

The literature review reflects the common belief that teaching is a stressful profession, and one full of demands. Teachers experience stress from low salaries, a lack of support, additional accountability, student behavior, their workloads, the environment of the school, and other sources. The same stressors are present for those teachers in Arctic Alaska. While the

teachers in Arctic Alaska contend with the same stressors as their counterparts in the south, teachers in Arctic Alaska contend with unique living situations that the majority of teachers do not. Teachers in Arctic Alaska live in remote areas without the opportunities for diversion that accompany urban areas, they live in dark, cold winters, and bright summers. While research by Kaden and colleagues (2016) demonstrated the stressors that teachers in Arctic Alaska feel, there was not an application or assessment of stress reduction techniques to reduce this stress.

Stress Reduction Techniques

Just as stress is not experienced the same in every individual, different stress reduction techniques work for different individuals. There are a variety of factors that contribute to the daily stress experienced by teachers. Depending on a teacher's individual coping skills and what they perceive to be stressors, some of these factors may affect some teachers more than others. Between the demands on teachers at school, and the demands on them in their personal lives, it is imperative that teachers take time for themselves to practice stress reduction techniques to mitigate outcomes from a stressful environment. Some reduction techniques take no additional time out of an already busy day; some require alterations to daily routines (The American Institute of Stress, n.d.).

In recent years, numerous studies have demonstrated the positive results of various physical, mental, and emotional self-care techniques (American Psychological Association, 2014a; Jennings, 2016; The American Institute of Stress, n.d). As stress is different for every individual, the reduction of stress also differs for every individual. There are several ways to reduce and prevent stress, including physical exercise, dietary changes, and breathing methodologies. Taking care of oneself physically and emotionally—practicing self-care—is the best way to mitigate the effects of stress (The American Institute of Stress, n.d.).

Physical

Exercise. Although it might seem contradictory, putting physical stress on the body helps to relieve mental stress (American Psychological Association, 2014a; Jennings, 2016; The American Institute of Stress, n.d). The benefits increase exponentially with the longevity of the exercise regime. Exercise is one of the most beneficial actions that one can take to reduce stress, and the benefits of exercise are experienced in several different areas (American Psychological Association, 2014a; Jennings, 016; The American Institute of Stress, n.d). Exercise lowers stress hormones, such as cortisol (the primary stress hormone), in the body, while simultaneously releasing endorphins, which are chemicals that improve individuals' mood and act as natural painkillers (Jennings, 2016; Mayo Clinic, 2016). Exercise also improves an individual's quality of sleep, which is negatively affected by stress and anxiety. Lastly, consistent exercise can increase an individual's feelings of confidence and competence, which promotes mental well-being (Jennings, 2016).

Yoga. Yoga, an ancient Indian practice, is used to promote physical and mental health through postures, the regulation of breathing, and meditation (Yoshihara et al., 2014). Past studies have suggested that the practice of yoga reduces perceived stress and negative feelings and improves psychological symptoms (Yoshihara et al., 2014). In recent years, yoga has increased in popularity as a method of increasing physical activity and reducing stress among all age groups (American Psychological Association, 2014a; Jennings, 2016; The American Institute of Stress, n.d). In addition to the physical benefits, some studies have looked at the effects of yoga on mental health. Results have shown that yoga can enhance an individual's mood and may even be as effective as antidepressant drugs as a treatment for anxiety and depression (American Psychological Association, 2014a; Jennings, 2016; The American Institute of Stress,

n.d). The benefits of yoga in combatting stress and anxiety are linked to lowered cortisol levels, reduced blood pressure and heart rate, and increased gamma-Aminobutyric acid, a neurotransmitter found to be lower than average in individuals with mood disorders (Jennings, 2016).

Diet. There is an Ayurvedic proverb that goes, "When diet is wrong, medicine is of no use; when diet is correct, medicine is of no need (Natural News, 2012 p.1)." In addition to a well-balanced, healthy diet, several supplements can be used to reduce stress and anxiety:

- Lemon balm, a member of the mint family, has been studied for its antianxiety properties (Jennings, 2016).
- Omega-3 fatty acids: One study showed that students who received omega-3 supplements experienced a 20% reduction in anxiety symptoms (Jennings, 2016).
- Ashwagandha is an herb used in Ayurvedic medicine that several studies have shown to be effective in the treatment of stress and anxiety (Jennings, 2016).
- Green tea, if consumed when full, provides polyphenol antioxidants, which may help to reduce stress and anxiety by increasing serotonin levels (Jennings, 2016).
- A popular sleep aid is valerian root, due to its tranquilizing effect. The root contains valerenic acid, which alters gamma-Aminobutyric acid receptors to lower anxiety (Jennings, 2016).
- Kava kava is a psychoactive member of the pepper family that has long been used as a sedative in the South Pacific and is being used increasingly more often in Europe and the US to treat mild stress and anxiety (Jennings, 2016; The American Institute of Stress, n.d.).

Some supplements can interact negatively with certain medications or produce side effects, so individuals are advised to consult a doctor before introducing supplements (Jennings,

2016). Additionally, long-term use of prescription medications can result in dependency or adverse side effects, and some supplements can result in similar problems or interact negatively with other drugs. St. John's wort has been shown to interfere with numerous medications, and kava kava has been banned in the UK because of the liver damage it can cause (The American Institute of Stress, n.d.).

When stressed, for many individuals the instinct is to turn to "comfort foods" melty mac n'cheese, big bowls of ice cream, chocolate, pizza and other such foods that reduce stress. While certain foods do reduce stress, it is not necessarily the comfort ones that do (Howard, 2016; The American Institute of Stress, n.d.). Superfoods are those foods that affect the body beyond providing nutrition. In addition to providing nutrition, superfoods boost glutathione in the body, an amino acid in charge of detoxification. Through this dual act of providing nutrients and detoxifying the body, superfoods aid to reduce stress (Howard, 2016). There are plentiful Alaska Native foods that are superfoods such as salmon, and berries rich in Vitamin C (Howard, 2016).

Sleep. Many people underestimate the impact that sleep has on one's emotional and physical well-being (American Psychological Association, 2014b; The American Institute of Stress, n.d.). Sleep is a necessary human function that allows the brain and body to rest and recharge. If individuals do not get enough sleep, the body is not able to reap its benefits, such as muscle repair and memory consolidation (American Psychological Association, 2014b). Even slight sleep deprivation or poor sleep can affect memory, judgment, and mood. Individuals who get less than eight hours of sleep report increased levels of stress compared to individuals who receive at least eight hours of sleep (American Psychological Association, 2014b). In addition to causing feelings of listlessness and a lack of motivation, chronic sleep deprivation can contribute to a myriad of health problems, such as obesity and high blood pressure, and pose as a safety risk

while driving. Research by the American Psychological Association (2014b) has shown that most individuals would be happier, healthier, and safer if they slept an extra 60 to 90 minutes per night.

Breathing. Deep breathing helps one focus on relaxing one's mind at a particular moment in time. When an individual is stressed, the sympathetic nervous system is activated, preparing the body to go into "flight or fight" mode (Jennings, 2016; National Center for Complementary and Integrative Health, 2017). During the "flight or fight" reaction, stress hormones are released, and the individual experiences the physical symptoms of stress, such as increased heart rate, increased breathing, and constricted blood vessels. During these moments, deep breathing exercises help to activate the parasympathetic nervous system, which controls the relaxation response (Jennings, 2016). There are several types of deep breathing exercises: diaphragmatic breathing, abdominal breathing, belly breathing, and paced respiration (Jennings, 2016). The goal of deep breathing exercises is to focus one's awareness on one's breath, slowing and deepening it by breathing deeply through the nose, fully expanding the lungs and causing the stomach to rise. Breathing in this way helps slow one's heart rate, allowing the individual to feel more at peace. Deep breathing exercises are a quick fix that an individual can perform in the midst of a stressful situation to reduce stress immediately.

Seasonal Affective Disorder. Seasonal Affective Disorder (SAD) is a seasonal depression that typically starts in the late fall or early winter with symptoms abating in spring and summer (National Institute of Mental Health, 2016). SAD is commonly mistaken as a separate disorder, however is a type of depression displaying a recurring seasonal pattern. To be diagnosed with SAD, individuals must display criteria for major depression coinciding with specific seasons for at least two years. Common symptoms of SAD include: low energy,

hypersomnia, overeating, craving of carbohydrates, weight gain, and social withdrawal. Those living in Arctic Alaska are more susceptible than others for experiencing SAD due to their northern location. In addition, those individuals that already have depression or bipolar disorder may experience an increase in symptoms with the change in seasons. Treatment for SAD encompasses: light therapy, Vitamin D, medication, and psychotherapy (National Institute of Mental Health, 2016). Even if an individual is not diagnosed with SAD, they may find benefits from light therapy and additional Vitamin D in the darkness of winter.

Mental

Meditation. Meditation is an excellent way to reduce stress: not only does it ground the individual but it also incorporates breathing exercises, which have been shown to reduce stress. Meditation is centered around mindfulness and includes practices to anchor the individual to the present moment. There are several methods for increasing mindfulness, including yoga meditation, mindfulness-based cognitive therapy, and mindfulness-based stress reduction. Studies have shown that mindfulness can help to combat the effects of anxiety and negative thinking and to reduce stress (Jennings, 2016; National Center for Complementary and Integrative Health, 2016; National Institute of Mental Health, n.d.).

In 1999, Anderson and colleagues conducted a study on the effects of meditation on the reduction of daily stress in teachers. The purpose of the study was to assess the value of a five-week standardized meditation program as a means of daily stress management for educators. The study focused on the use of meditation to modify teachers' perceptions of occupational stress, to reduce trait anxiety levels in teachers, to lower the level of burnout experienced by teachers, and to determine whether teachers would be willing to follow through on a program of regular meditation (Anderson et al., 1999).

Data were collected from 91 full-time teachers employed by seven suburban public school districts in three states (Pennsylvania, Illinois, and Missouri) (Anderson et al., 1999). The majority of participants were female. Participants ranged in age from 22 to 60; 63% were married, 22% were single, and 15% were either widowed or divorced. The participants were 1% African-American, 1% Asian, 93% Caucasian, and 4% Hispanic. The teachers taught either elementary, middle, or at the high school level. Most teachers earned either Bachelors (55%) or Master's (26%) degree, with a few (19%) having education beyond a master's degree (Anderson et al., 1999).

The participants were instructed to meditate twice a day for 20-minute periods: once at school and once at home. Group leaders followed up with them to ensure proper practice (Anderson et al., 1999). The study offered promising findings, with a posttest using the Teacher Stress Inventory (Fimian, 1988), the State-Trait Anxiety Inventory (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1984), and the Maslach Burnout Inventory (Maslach, Jackson, Leiter, Schaufeli, & Schwab, 2016) showing a reduction in the teachers' stress and anxiety. The teachers reported physical benefits such as less exhaustion, more energy, and refreshed feelings, which may be the result of improved sleep. The teachers also reported emotional benefits of the meditation, such as being less worried, being more relaxed and tolerant of children's behaviors, and viewing situations more objectively.

Writing. Writing provides a tangible means for the mind to organize and conceptualize the stressors in one's life (The American Institute of Stress, n.d.) Writing allows individuals to explore their thoughts and feelings as well as their reactions to those thoughts and feelings. Writing also allows individuals to acknowledge what they are grateful for in addition to what is causing them stress. Fostering feelings of gratitude can help relieve stress and anxiety by helping

focus a person's thoughts on the positive rather than the negative aspects of situations (Jennings, 2016; The American Institute of Stress, n.d.)

Hobbies. Hobbies are another effective source of stress reduction (Jennings, 2016; National Institute of Mental Health, n.d; The American Institute of Stress, n.d.). Hobbies provide individuals with the opportunity to focus on a positive task as opposed to focusing on negative thoughts and feelings. Hobbies can also provide a break from a monotonous routine and, in some aspects, can enable the mind to wander, allowing individuals to explore thoughts and feelings that not at the forefront of their mind. In recent years, coloring, knitting, and sewing have become popular ways for individuals to relax and reduce stress (The American Institute of Stress, n.d.). Hobbies can induce the same "relaxation response" as yoga, meditation, and other relaxation techniques, enabling the mind to focus solely on something colorful and expressive. One of the best aspects of hobbies is that they grant individuals the freedom to express who they are through energetic and nonjudgmental media.

Emotional

Support. In addition to exercise, the most beneficial means of combating stress is through the support of friends and family (American Psychological Association, 2014a; Jennings, 2016; The American Institute of Stress, n.d.). Studies have shown that social support—including support from colleagues, administrators, and family—plays an integral part in preventing or reducing burnout in teachers (e.g., Yildirim, 2017). A positive social climate at school, including social support and positive relations with colleagues, parents, and students, has been shown to have a negative impact on the stress that a teacher experiences and his or her propensity for burnout (Skaalvik & Skaalvik, 2015). Being part of a network of friends provides the individual with a sense of belonging and self-worth, which can help in times of high stress or

anxiety (Jennings, 2016; National Institute of Mental Health, n.d.; The American Institute of Stress, n.d). In particular, one study conducted by Taylor and colleagues (2000) found that, for women, spending time with friends and children releases oxytocin, a natural stress reliever, essentially meaning that friends can trigger the opposite of the fight or flight response. Another study done by Cadzow and Servoss (2009) found that individuals with only a few social connections were more likely to suffer from depression and anxiety.

Coping. Other emotional methods to reduce stress center on accepting the factors that cause stress and learning to cope with them. This act of resiliency and learning to cope with stressors has been shown to contribute to the prevention of burnout in teachers (Yildirim, 2017). Developing coping strategies and the ability to interpret stressful events positively differs from an individual giving up the struggle against stress and letting it consume them. The former has a positive effect on the individual and actively decreases the chance of burnout, whereas the latter has a negative effect on the individual and actively contributes to his or her burnout (Yildirim, 2017).

Many of the above stress-reduction techniques are designed to reduce the emotional and somatic effects of stress. The focus in recent years has been to take a proactive, rather than a reactive, approach to prevent stress-related problems altogether (The American Institute of Stress, n.d.). A proactive approach includes identifying the sources of stress in an individual's life and finding ways to either avoid them or reduce their impact. It is important to note that some self-care methods applied to reduce stress may have the unintended consequence of actually creating more stress. Examples of these harmful methods include taking drugs, smoking, overeating, or consuming alcohol. These habits and traits can be reduced through cognitive restructuring techniques such as behavioral modification, assertiveness training, time

management, and stress inoculation (American Psychological Association, 2014; The American Institute of Stress, n.d.).

As indicated, the key to reducing stress is to prevent it as much as possible. Taking the proper measures to ensure that the individual is sleeping sufficiently, maintaining a proper diet, avoiding excess caffeine and other stimulants, and taking time off to relax may be helpful in this regard (The American Institute of Stress, n.d.). Many stress relievers work via the placebo effect that comes from having faith in the procedure or the therapist, and various other approaches can achieve the same results by reducing feelings of helplessness and providing a sense of control over the problem (The American Institute of Stress, n.d.).

Basic Application

A review of the literature revealed there is a national teacher shortage and obvious obstacles to enticing new teachers to come work in arctic Alaska. Administrators have discussed the difficulty to keep schools fully staffed. The University of Alaska has reported that the number of education graduates does not meet the demands of the school districts in Alaska (Hanlon, 2017). Teacher turnover is costing the state millions annually—money that could otherwise be spent on students (Hanlon, 2017). Teachers in Alaska face the same stressors as teachers in any other state, with the exception that rural teachers may experience more stress. Alaska needs to do everything possible to retain teachers.

In an effort to introduce new teachers to the way of life they would experience teaching in rural Alaska, the Alaska Humanities Forum introduced a new program in 2011. The mission of the program is to combat teacher turnover through the familiarization of the culture, education, and way of life in the Alaskan Bush (Heimbuch, 2011). In addition to the cultural and communal support that the forum provides, teachers are also placed in a partnership with a

master-teacher to provide professional and academic support (Boots, 2014; Curry & O'Brien, 2012; Heimbuch, 2011).

The implementation of a program centered on valuing diversity, such as the Alaska Humanities Forum C3 program, might help teachers to overcome cultural differences that can cause teacher attrition. This involvement might help the teacher to feel invested and involved rather than internalizing feelings of being an outsider (Boots, 2014). The C3 program has a teacher retention rate of 87.2 percent apparently due to the cultural competency that the new teachers achieved (Boots, 2014). Teaching students in Arctic Alaska in ways that allow them to keep their cultural identity is vital for student motivation, curriculum relevance, and ultimately community and cultural stability. Maintaining an effective and stable teacher workforce that understands and embraces the powerful local contexts of Alaska's rural villages is critical for healthy and resilient communities (Kaden et al., 2016).

Teachers in Arctic Alaska are often dissatisfied with the district leadership, their connections with parents, community support, their job and teaching careers, and student contact (Kaden et al,. 2016). Teachers reported less than 50% satisfaction in all these areas, and, as of 2016 were reporting they were unsure if they would stay in their districts or leave. Based on the literature, teachers experiencing constant stressors with no reduction will leave that environment whether to go to a new school or to leave the profession altogether. However, Yildrim (2017) found that teachers who have participated in stress reduction techniques are less likely to leave, as they feel better equipped to handle stressors. The implementation of a stress reduction program could help to retain teachers. With increased teacher retention, schools may improve relationships with community members and teachers may receive improved support.

To this end, school administrators, counselors, and teachers are in a position to monitor the actions of their colleagues and provide assistance (Collie et al., 2012; Sass et al., 2011; Sedivy-Benton & Boden-McGill, 2012). When considering a vehicle for communication the abilities of the location need to be taken into consideration. In some of the more rural areas of Arctic Alaska, internet connection is notoriously inconsistent. With this inconsistency in mind, though low-tech and old-schooled, brochures are one way of getting a message to the public (Hampton, n.d.). Brochures are best placed in areas where there is a "captive audience": the teachers' break room, school counseling offices, teacher mail box areas, and placed in packets given to the teachers (Hampton, n.d.). These brochures should be handed out at staff meetings, and again during natural times of high stress: finals, testing, and holidays. Brochures highlighting the many ways to practice self-care to reduce the effects of stress have been designed and will be distributed to provide awareness to teachers. On the brochures, specific information on the various areas of stress reduction will be provided. In addition, several apps (e.g., Calm, Smiling Mind, iCouch CBT, Pacifica) can be downloaded for individuals to use to foster self-care behavior these will also appear on the brochures.

Conclusions and Future Research

Teaching is one of the most difficult yet most rewarding professions one can pursue. Teachers are exposed to many different facets of stress that can affect them at any given moment of time, including potential stress from the administration, students, parents, colleagues, and life in general (Collie et al., 2012; Harris, 2011; Kaden et al., 2016; Sass et. al., 2011; Sedivy-Benton & Boden-MGill, 2012; Spilt et. al., 2011;). A consequence of their chosen profession is that teachers are able to give less of themselves. As a result, teachers are more vulnerable than most other professionals to burnout and attrition. When professional stress is combined with atypical

living conditions, such as life in remote Alaska, the potential for stress and burnout increases. Studies have demonstrated the high effectiveness of even just a couple of stress reduction techniques on the mental wellness of teachers and attrition rates. School psychologists and counselors in particular are in a key position to recognize the issue of teacher stress and advocate for the implementation of programs to reduce the negative effects of stress. The implementation of a program to help teachers learn more about coping strategies and how to reduce stress is a key opportunity for school districts vulnerable to teacher attrition. In addition, consideration for the viability of a teacher counseling group is worthy of exploration.

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Apps to Help with Stress Reduction

Recolor—free coloring app

iCouch CBT— self guided Cognitive Behavioral exercises and log

Calm—guided meditation and soothing sounds

Smiling Mind—meditation app developed by psychologists and educators to bring mindfulness into your life

Pacifica—meditation and tools for tracking mood, health and thoughts. Exercises to increase mindfulness and mental health

Daily Yoga—yoga brought to your device that can be done at any time

7 MWC—7 minute workout that can be done almost anywhere at anytime

Plant Nanny—track your water intake by growing and taking care of virtual plants.

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STRESS

How to recognize it

How to reduce it

How Stress Manifests

Mental stress can manifest in different physical symptoms[8]

- ⇒ Headaches
- ⇒ Dizziness
- ⇒ Chest Pain
- ⇒ Lower Back Pain
- ⇒ Nausea
- ⇒ Muscle Soreness
- ⇒ Breathing Problems
- ⇒ Hot or Cold Spells
- ⇒ Numbness or Tingling in parts of the Body
- ⇒ Lumps in the Throat
- ⇒ Weakness in the Limbs
- ⇒ Heaviness in the Arms or Legs

Take a Self-Assessment Online

https://www.stress.org/self-assessment/[6]

Ways to Reduce Stress

Exercise[1,3,6]— Next to social support, routine exercise is one of the most effective means of reducing stress in an individual. Exercising in nature bumps the effectiveness of stress reduction.

Yoga[1,3,6,8]— Yoga is an ancient technique that has been used to center the mind and body through postures, the regulation of breathing, and meditation. You do not have to be flexible to participate in, or reap the benefits of yoga.

Diet[3,6]— Eat a healthy well balanced diet. A diet rich in essential vitamins, trace minerals, healthy fats, electrolytes, amino acids, and antioxidants help the brain to handle stress. When stressed, individuals' are more prone to reaching for "empty fillers". This can place further stress on the body.

Sleep[2,6]— Sleep has a significant impact on the emotional, and mental wellbeing of an individual. Routinely getting less than eight hours of sleep at night increases the vulnerability to additional stress. To help, try natural supplements, removing technology, and keep a writing pad next to your bed.

Deep Breathing[3,4]— When feeling stressed, focus on breathing deeply. Close your eyes, sit up straight and focus on nothing but breathing deeply.

Ways to Reduce Stress

Meditation[3,4,5]— Taking a few minutes during the day to meditate and focus on breathing can ease stress and anxiety.

Writing[3,6]— Writing down thoughts and feelings is an effective way to monitor the state of mind and bring clarity to troubled thoughts. Writing also helps identify any patterns in behaviors or thought processes.

Hobbies[3,5,6]— Hobbies provide individuals with the opportunity to focus on a positive task as opposed to focusing on negative thoughts and feelings. In recent years coloring, knitting, and crocheting have become popular means to let the mind focus on the positive.

Support[1,3,6,7]—Do not face stress alone. Being part of a network of friends provides a sense of belonging and self-worth, which can help in times of high stress or anxiety